Technology: Microelectronics

Active Denial

An invisible millimetre beam which heats water molecules in humans so no-one can withstand the pain it produces for more than three seconds, is known as the Active Denial system and has been developed for US troop evaluation this autumn. Military officials say years of testing have produced no sign it will lead to health effects beyond perhaps causing skin to temporarily redden. It is among the most potent of a new generation of futuristic 'less-than-lethal' weapons being developed by the Defense Department, potentially able to alter the way soldiers fight and police control riots.

Acquisition boosts RFMD

RF Micro Devices completed its acquisition of Silicon Wave whose CMOS Bluetooth products for wireless personal area networks will expand RF Micro's total addressable market, the companies said. In addition, to bolster RF Micros position in the handset market, volume production of Silicon Wave's Bluetooth handset components is currently ramping up.

AWSC's global share

The Taiwan-based HBT foundry Advanced Wireless Semiconductor Company is on record it will ship 2m cellular handset power amplifiers (PAs) this year, according to Internet site DigiTimes. The company expects to achieve a 3.5% share of the global cellular PA market in 2004, up from the 1% share last year. It shipped 6m GSM PAs to Skyworks in 2003, and forecasts this will rise to nearly 14m this year.

JDIG grant moves Harris to North Carolina

A 10 year Job Development Investment Grant from the state of North Carolina, valued at $4m or 69% of the personal state withholding taxes derived from the creation of new jobs, has helped to convince the microwave communications division of international communications equipment company Harris Corp to relocate its divisional headquarters from Redwood Shores, CA to Durham, which will add 258 new jobs in Durham over the next five years.

Melbourne, Fla.-based Harris Corp says it would add about 80 jobs to the new HQ in Keystone Park this year. About 10 of the employees will transfer from California, while the rest will be local hires. The jobs are in the areas of marketing, engineering, finance and supply chain management, and will have an average salary of about $61,000 a year, plus other benefits, according to Gov. Mike Easley, who joined with Harris officials in announcing the move.

Microwave Communications division president Guy Campbell emphasised that the division's decision to relocate to Durham was contingent on the state awarding it a JDIG grant. "It was competitive. We were looking in North Carolina, Texas and Florida, and North Carolina did win," Campbell said. "Our decision to come to North Carolina was based to a great extent on this grant." Harris has not been granted any other state or local incentives from Durham County, says Ted Conner, vice president of economic development for the Durham Chamber of Commerce. The company will be eligible for state tax credits under the William S. Lee Act.

Harris Corp currently employs 59 people in a Microwave Communications division research facility in Keystone Park, which has a Morrisville address but is inside Durham County. The division employs between 200–220 employees in California, said Campbell. The company claims to be the largest supplier of microwave coms systems in north America. Its product line includes both microwave and millimeter wave systems.

NC Department of Commerce estimates Harris will contribute about $3.7bn to the gross state product value and about $165m to the state tax rolls in the next 10 years, based on a formula devised by North Carolina State University economics professor Michael Walden. The grant requires the company to contribute to the state's Industrial Development Fund for infrastructure improvements in rural North Carolina since it chose to locate in an urban, prosperous county. The state estimates Harris Corp will contribute nearly $1.3m to the fund.

This is the second company lured from California's Silicon Valley to North Carolina through the JDIG program. General Electric Power Systems chose in October to move its nuclear energy unit global HQ to Wilmington after the state awarded it a JDIG grant valued at $5.9m over nine years.

The state awards up to 15 JDIG grants annually to new and expanding businesses and industrial projects. JDIGs are awarded only to projects whose benefits exceed their costs to the state and that would not locate in North Carolina without the grant. Cumulative annual grant amounts are capped at $10m. Harris Corp employs 10,000 people and posted $2.1bn sales in fiscal 2003.

Celeritek amplifier modules for 2005

Manufacturer of GaAs semiconductor components and subsystems supplier Celeritek's 4Q 2004 fiscal results showed revenues of $8.6m, compared with $7.7m in 3Q of 2004 and $8.1m in the 4Q of fiscal 2003. Net loss for the 4Q 2004 was $0.2m or 2c/share, compared with a net loss of $4.5m or 37c/share for the same period a year ago. For fiscal 2004, revenues were $29.9m compared with revenues of $49.4m in 2003. The net loss for fiscal 2004 was $16m or $1.28/share, compared with $17m or $1.39/share for 2003.

The current net loss included special charges of $4.3m from exiting the handset market and consisted of charges for equipment impairments, building lease impairment and severance costs. Net loss also included $3.4m related to strategic activities and shareholder actions. Net loss for fiscal 2003 included a $4.4m write off related to Celeritek's acquisition of Tavanza, Inc and special charges of $2.8m for severance costs, abandoned fixed assets, equipment leases, and $1.3m related to strategic activities and shareholder actions.

Celeritek's backlog at March 31, 2004 was $15.6m compared to $15.8m at the end of December 2003, comprised of $12.7m in subsystems and $2.9m in semiconductor products, including $0.7m for a development contract expected to result in production quantities of satellite handset power amplifier modules in the second half of fiscal 2005. Book-to-bill ratio in the quarter for subsystem products was 1.1 and for semiconductor products was 0.7.